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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/905,568	07/12/2001	Warm Shaw Yuan	M-7976 US	2876

27774 7590 11/04/2003

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EXAMINER

CHASE, SHELLY A

ART UNIT	PAPER NUMBER
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2133

DATE MAILED: 11/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/905,568

Applicant(s)

YUAN, WARM SHAW

Examiner

Shelly A Chase

Art Unit

2133

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 July 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4-23,39-41,47 and 48 is/are allowed.
- 6) ☒ Claim(s) 1-3,24-38,42-46 and 49 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

1. Claims 1 to 49 are presented for examination.

***Information Disclosure Statement***

2. The references listed in the information disclosure statement submitted on 7-12-2001 have been considered by examiner (see attached PTO-1449).

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1 to 3, 24 to 38, 42 to 46, and 49 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, recites the limitation "generating a table, comprising:" on line 3. this limitation creates a vague claim, the examiner is unsure as to what the claimed method comprises. Claims 1 to 3 are also rejected due to their dependency on a rejected base claim.

Claims 24, 42, 46 and 49 have a similar problem to claim 1. Claims 25 to 38 and 43 to 44 are dependent on a rejected base claim thus, these claims are also rejected under 112 second paragraph.

***Allowable Subject Matter***

5. Claims 4 to 23, 39 to 41, 47 and 48 are allowed.

6. The following is a statement of reasons for the indication of allowable subject matter: the prior art made of record teaches various methodologies of turbo decoding implementing maximum a posterior probability decoding with a look-up table and a scaling factor. For instance, Caldara et al. (USP 6425107 B1), discloses a decoder for high-speed serial link wherein the decoder includes a look-up table with plural entries. Dinc et al. (USP 6393076 B1), discloses decoding turbo codes wherein a decoder includes two soft-in soft-out (SISO) decoders and a scaling circuit. Dinc also teaches MAP decoders computing logarithmic values. Hladik et al. (USP 6263467 B1), discloses turbo code decoder employing MAP decoding algorithm, and Such et al. (USP 6477679 B1), discloses a method for decoding data employing MAP decoding and scaling the decoded data. However, the prior art made of record fail to teach or fairly suggest the novel element of the instant invention.

Claims 4, 7, 39, 47 and 48:

The primary reason for allowance is that the claims includes computing or implementing the function  $\log(e^{x_1} + e^{x_2})$  or  $\ln(e^{x_1} + e^{x_2})$  for each argument value  $x_1$  and  $x_2$  in a table with plural entries, plural fields and plural index values that are scaled by a scaling factor. Claims 5 to 6, 8 to 23 and 40 to 41 are directly or indirectly dependent on claims 4, 7 and 39 thus, these claims are allowable over the prior art made of record.

7. Claims 1 to 3, 24 to 38, 42 to 46 and 49 would be allowed once the 112 second paragraph rejection is overcome.

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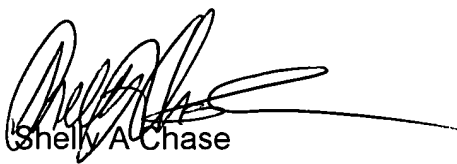
Independent claims 1, 24, 42, 46 and 49 are similar to claim 7 and are allowed for the same rationale applied to claim 7. Dependent claims 2 to 3, 25 to 38 and 43 to 45 are allowed due to their dependency on independent claims 1, 24 and 42.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shelly A Chase whose telephone number is 703-308-7246. The examiner can normally be reached on Mon-Thur from 8:00 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on 703-305-9595. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-9600.



Shelly A Chase